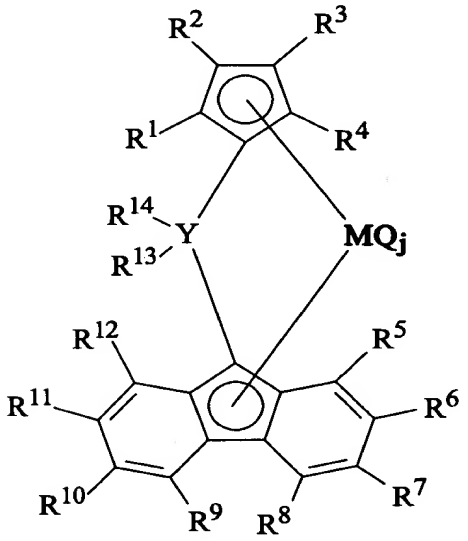
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

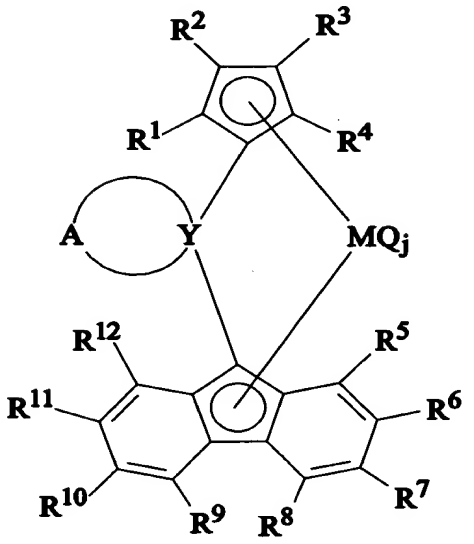
LISTING OF CLAIMS:

Claim 1 (Canceled)

2. (Currently Amended) A metallocene compound represented by the following formula (1a) or (2a):



...(1a)

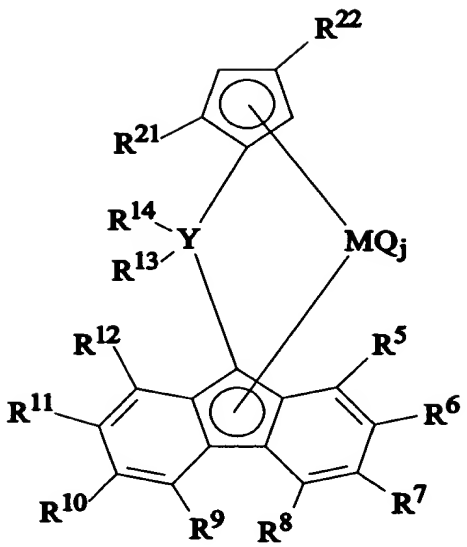


...(2a

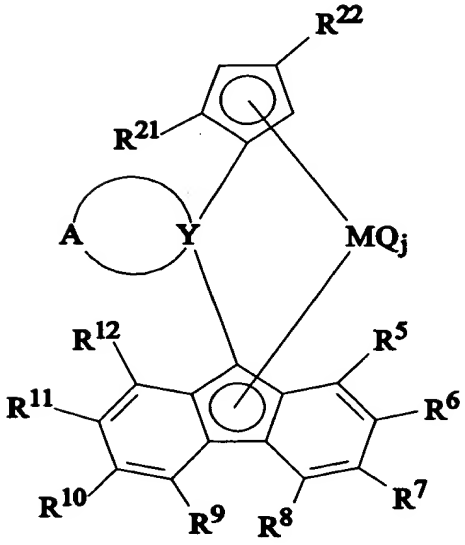
wherein R^2 is hydrogen; R^3 is selected from a hydrocarbon group or a silicon-containing hydrocarbon group; R^1, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13} and R^{14} may be the same or different and are each selected from a hydrogen atom, a

hydrocarbon group or a silicon-containing hydrocarbon group; in case of a compound of the formula (1a), when R^3 is a tert-butyl group or a trimethylsilyl group and when R^{13} and R^{14} are methyl groups or phenyl groups at the same time, R^6 and R^{11} are not hydrogen atoms at the same time; of the groups indicated by R^5 to R^{12}, neighboring groups may be bonded to form a ring; and when all of R^5 to R^{12} are hydrogen, R^1 and R^4 are not both hydrogen and R^3 is a hydrocarbon other than phenyl; when R^7 and R^{10} are both tert-butyl, and R^5, R^6, R^8, R^9, R^{11} and R^{12} are all hydrogen, R^3 is not methyl, tert-butyl or trimethylsilyl; in case of the formula (1a), a group selected from R^1, R^4, R^5 and R^{12} may be bonded to R^{13} or R^{14} to form a ring; A is a divalent hydrocarbon group of 2 to 20 carbon atoms which may contain an unsaturated bond and/or an aromatic ring; A may contain two or more cyclic structures including a ring formed by A in cooperation with Y; Y is a carbon atom or a silicon atom; M is a metal selected from Group 4 of the periodic table; j is an integer of 1 to 4; Q is selected from the group consisting of a halogen atom, a hydrocarbon group, an anionic ligand and a neutral ligand capable of coordination by a lone pair; and when j is 2 or greater, each Q may be the same or different.

3. (Currently Amended) A metallocene compound represented by the following formula (1b) or (2b):



...(1b)



...(2b

wherein R^{21} and R^{22} may be the same or different and are each selected from a hydrocarbon group or a silicon-containing hydrocarbon group; R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13} and R^{14} may be the same or different and are each selected from a hydrogen atom, a hydrocarbon group or a silicon-containing hydrocarbon group; of the groups indicated by R^5 to R^{12}, neighboring groups may be bonded to form a ring; and when R^{22} is tert-butyl and R^{13} and R^{14} are methyl, R^6, R^7, R^{10} and R^{11} are not all hydrogen; when all of R^5 to R^{12} are hydrogen, R^{22} is a hydrocarbon other than phenyl, and when R^7 and R^{10} are both tert-butyl and R^5, R^6, R^8, R^9, R^{11} and R^{12} are all hydrogen, R^{22} is not methyl, tert-butyl or trimethylsilyl; A is a divalent hydrocarbon group of 2 to 20 carbon atoms which may contain an unsaturated bond and/or an aromatic ring; A may contain two or more cyclic structures including a ring formed by A in cooperation with Y; M is a metal selected from Group 4 of the periodic table; Y is a carbon atom or a silicon atom; j is an integer of 1 to 4; Q is selected from the group consisting of a halogen atom, a hydrocarbon group, an anionic ligand and a

neutral ligand capable of coordination by a lone pair; and when j is 2 or greater, each Q may be the same or different.

Claims 4-7 (Canceled)

8. (Previously Presented) An olefin polymerization catalyst comprising the metallocene compound of claims 2 or 3.

9. (Previously Presented) An olefin polymerization catalyst comprising:

(A) the metallocene compound of claims 2 or 3, and

(B) at least one compound selected from:

(B1) an organometallic compound,

(B-2) an organoaluminum oxy-compound, and

(B-3) a compound which reacts with the metallocene compound (A) to form an ion pair.

10. (Previously Presented) An olefin polymerization catalyst of claim 9 and (C) a particle carrier.

Claims 11-13 (Canceled)

14. (Withdrawn) A polyolefin which comprises recurring units (U_1) derived from one α-olefin selected from α-olefins of 3 to 8 carbon atoms in amounts of 50 to 100 % by mol and recurring units (U_2) other than the recurring units (U_1), said

recurring units (U_2) being derived from at least one olefin selected from α-olefins of 2 to 20 carbon atoms, in amounts of 50 to 0 % by mol, and has the following properties:

(i) the proportion of 2,1-insertion and the proportion of 1,3-insertion are each not more than 0.2 %,

(ii) the molecular weight distribution (Mw/Mn) as determined by gel permeation chromatography is in the range of 1 to 3, and

(iii) the quantity of a decane-soluble component is not more than 2 % by weight.

15. (Withdrawn) The polyolefin as claimed in claim 14, which comprises recurring units derived from propylene in amounts of 50 to 99.5 % by mol and recurring units derived from at least one olefin selected from α-olefins of 2 to 20 carbon atoms other than propylene in amounts of 50 to 0.5 % by mol.

16. (Withdrawn) A polyolefin which is a homopolymer of one α-olefin selected from α-olefins of 3 to 8 carbon atoms and has the following properties:

(i) the pentad isotacticity as determined from 13C-NMR spectrum measurement is not less than 85 %,

(ii) the proportion of 2,1-insertion and the proportion of 1,3-insertion are each not more than 0.2 %,

(iii) the melt flow rate (measured at 230°C under a load of 2.16 kg in accordance with ASTM D1238) is in the range of 0.01 to 1000 g/10 min,

(iv) the molecular weight distribution (Mw/Mn) as determined by gel permeation chromatography is in the range of 1 to 3,

(v) the quantity of a decane-soluble component is not more than 2 % by weight, and

(vi) the melting point (Tm) as measured by a differential scanning calorimeter is not lower than 140°C.

17. (Withdrawn) The polyolefin as claimed in claim 16, which is a homopolymer of propylene.

18. (Withdrawn) A polyolefin which comprises recurring units (U_1) derived from one α-olefin selected from α-olefins of 3 to 8 carbon atoms in amounts of 95 to 99.5 % by mol and recurring units (U_2) other than the recurring units (U_1), said recurring units (U_2) being derived from at least one olefin selected from α-olefins of 2 to 20 carbon atoms, in amounts of 5 to 0.05 % by mol, and has the following properties:

(i) the pentad isotacticity as determined from 13C-NMR spectrum measurement is not less than 80 %,

(ii) the proportion of 2,1-insertion and the proportion of 1,3-insertion are each not more than 0.2 %,

(iii) the melt flow rate (measured at 230°C under a load of 2.16 kg in accordance with ASTM D1238) is in the range of 0.01 to 1000 g/10 min,

(iv) the molecular weight distribution (Mw/Mn) as determined by gel permeation chromatography is in the range of 1 to 3,

(v) the quantity of a decane-soluble component is not more than 2 % by weight, and

(vi) the melting point (Tm) as measured by a differential scanning calorimeter is not higher than 145°C.

19. (Withdrawn) The polyolefin as claimed in claim 18, which comprises recurring units derived from propylene in amounts of 95 to 99.5 % by mol and recurring units derived from at least one olefin selected from α-olefins of 2 to 20 carbon atoms other than propylene in amounts of 5 to 0.5 % by mol.

20. (Previously Presented) A process for preparing a polyolefin comprising polymerizing or copolymerizing an olefin in the presence of the olefin polymerization catalyst of claim 8.

21. (Previously Presented) The process for preparing a polyolefin as claimed in claim 20, wherein the metallocene compound is the metallocene compound represented by the formula (1a) or (2a), and at least 2 kinds of olefins are copolymerized.

22. (Previously Presented) The process for preparing a polyolefin as claimed in claim 20, wherein the metallocene compound is the metallocene compound represented by the formula (1a) or (2a), and a single olefin is polymerized.

23. (Previously Presented) A process for preparing a polyolefin comprising polymerizing or copolymerizing an olefin in the presence of the olefin polymerization catalyst of claim 9.

24. (Previously Presented) The process for preparing a polyolefin as claimed in claim 23, wherein the metallocene compound (A) is the metallocene compound represented by the formula (1a) or (2a), and at least 2 kinds of olefins are copolymerized.

25. (Previously Presented) The process for preparing a polyolefin as claimed in claim 23, wherein the metallocene (A) compound is the metallocene compound represented by the formula (1a) or (2a), and a single olefin is polymerized.

26. (Previously Presented) A process for preparing a polyolefin comprising polymerizing or copolymerizing an olefin in the presence of the olefin polymerization catalyst of claim 10.

27. (Previously Presented) The process for preparing a polyolefin as claimed in claim 26, wherein the metallocene (A) compound is the metallocene compound represented by the formula (1a) or (2a), and at least 2 kinds of olefins are copolymerized.

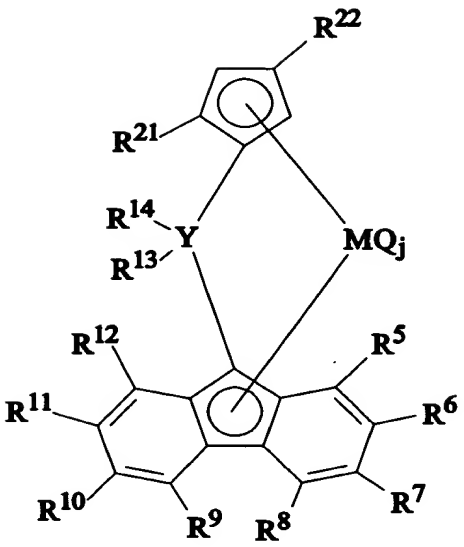
28. (Previously Presented) The process for preparing a polyolefin as claimed in claim 26, wherein the metallocene (A) compound is the metallocene compound represented by the formula (1a) or (2a), and a single olefin is polymerized.

29. (New) A process for preparing a metallocene compound, comprising selectively preparing a metallocene compound represented by the following formula (1b) or (2b) from a cyclopentadiene represented by the following formula (19b) as a starting material which is free of isomer represented by formula (20b), said process comprising the steps of:

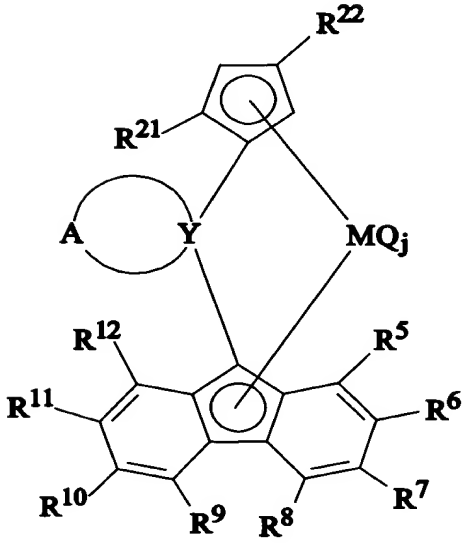
converting the cyclopentadiene of formula (19b) to a precursor compound represented by the following formula (13b) or (14b),

converting the precursor compound of formula (13b) or (14b) to a ligand precursor represented by the formula (7b) or (8b), and

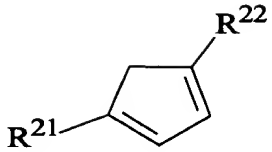
forming the metallocene compound represented by the following formula (1b) or (2b) from the ligand precursor represented by the formula (7b) or (8b);



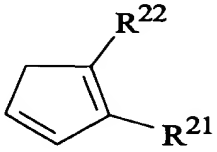
...(1b)



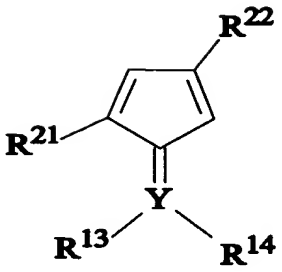
...(2b



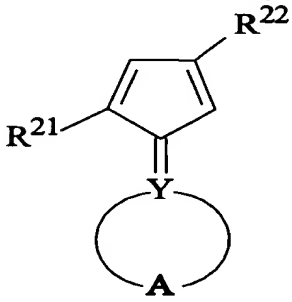
...(19b)



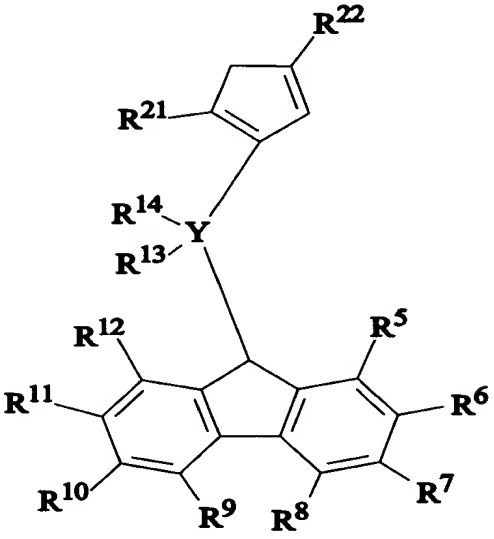
...(20b)



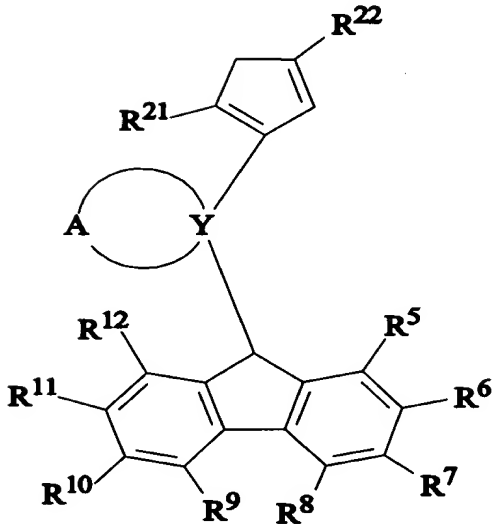
...(13b)



...(14b)



...(7b)



...(8b)

wherein R^{21} and R^{22} may be the same or different and are each selected from a hydrocarbon group or a silicon-containing hydrocarbon group; R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13} and R^{14} may be the same or different and are each selected from a hydrogen atom, a hydrocarbon group and a silicon-containing hydrocarbon group; of

the groups indicated by R^5 to R^{12}, neighboring groups may be bonded to form a ring; and

when R^{22} is tert-butyl and R^{13} and R^{14} are methyl, R^6, R^7, R^{10} and R^{11} are not all hydrogen;

when all of R^5 to R^{12} are hydrogen, R^{22} is a hydrocarbon other than phenyl,

when R^7 and R^{10} are both tert-butyl, and R^5, R^6, R^8, R^9, R^{11} and R^{12} are all hydrogen, R^{22} is not methyl, tert-butyl or trimethylsilyl;

A is a divalent hydrocarbon group of 2 to 20 carbon atoms which may contain an unsaturated bond and/or an aromatic ring; A may contain two or more cyclic structures including a ring formed by A in cooperation with Y; M is a metal selected from Group 4 of the periodic table; Y is a carbon atom or a silicon atom; j is an integer of 1 to 4; Q is selected from the group consisting of a halogen atom, a hydrocarbon group, an anionic ligand and a neutral ligand capable of coordination by a lone pair; and when j is 2 or greater, each Q may be the same or different.